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Janice Capuani

Name: Janice Capuani
Signature: Janice Capuani
Date of Signature: July 22, 2003

8/25/03
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Takeuchi et al.

Serial No. 09/176,374

Filed: October 21, 1998

For: Wound Element Electrode Assembly Design
For Use in Prismatic Case Electrochemical Cells

Group: 1745

Examiner: T. Dove

APPELLANTS' REPLY BRIEF MADE PURSUANT TO 37 CFR §1.193(b)(1)
AND IN RESPONSE TO EXAMINER'S ANSWER DATED MAY 22, 2003

Mail Stop Appeal Brief-Patents
Commissioner for Patents
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Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. §1.193
appellants submit the following Reply brief:

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TABLE OF CONTENTS

- I. Reasons In Support Of The Grouping Of Claims
- II. The Claims Rejected Under 35 U.S.C. § 112, Second Paragraph Are Not Indefinite
- III. There Exists No Basis For Combinability
- IV. Conclusion

TABLE OF AUTHORITIES

Cases:

ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929 (Fed. Cir. 1984).

In re Geiger, 815 F.2d. 686, 688, 2 U.S.P.Q.2d 1276 (Fed. Cir. 1987).

In re Rouffet, Tanguy, and Berthault, 149 F.3d 1350, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998).

Patents

U.S. Pat. No. 4,709,472 to Machida et al.

U.S. Pat. No. 5,549,717 to Takeuchi et al.

I. Reasons Supporting The Grouping Of Claims

The present grouping of claims is as follows: claims 1-10 are grouped together and claims 13-19 are grouped together.

Claims 1-10 (2-10 dependent on claim 1) are drawn to the methodology of making an electrode assembly (method claims), whereas claims 13-19 (14-19 dependent on claim 13) are separately patentable, as they are drawn to a high rate cell.

Also, the facts section of the appellate brief support the grouping of the claims presented by appellant. In particular, the cell is first described on pages 4-6 of the appellate brief. Then, the method of winding is described on pages 6-7 of the appellate brief. Similarly, for the second embodiment, the cell is described first on page 7 of the appellate brief, and then the method for winding the cell of the second embodiment is described on pages 8-9.

Twice amended claim 1 for the method of winding is discussed on pages 14-16, while amended claim 13 for the cell is discussed separately on page 17.

Thus, appellants have shown the grouping of the claims 1-10 is proper and the grouping of claims 13-19 is proper.

Reply Argument

II. The Claims Rejected Under 35 U.S.C. § 112, Second Paragraph Are Not Indefinite

In response to the 35 U.S.C. § 112 rejections of claims 5,6,8,9, and 16-18 presented by the Examiner in his Answer, appellants reassert their previously submitted arguments as set forth in their appellate brief.

III. There Exists No Basis for Combinability

The Examiner rejected claims 1-19 under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 4,709,472 to Machida et al. (hereinafter Machida) in view of U.S. Pat. No. 5,549,717 to Takeuchi et al. (hereinafter Takeuchi).

It is important to consider the claim language of the rejected claims. The following are excerpts from the rejected independent claims:

- a) twice amended claim 1 recites "folding the combination . . . said mandrel being of substantially rectangular cross-section having a pair of substantially parallel and planar oppositely facing surfaces";
- b) amended claim 11 recites "one of the electrodes is folded in upon itself to form a substantially rectangular shaped pocket";
- c) amended claim 12 recites "the longer of the electrodes being folded upon itself"; and
- d) amended claim 13 recites "one of the electrodes folded in upon itself to define a substantially rectangular-shaped

pocket."

Machida, which the Examiner uses as the primary reference to deny patentability, repeatedly teaches against folding electrodes. In particular, Machida clearly teaches against folding/bending electrodes in at least four instances:

a) the first instance, "the electrode member is bent at an angle of about 90°. . . As a result, this electrode member tends to be torn at that area." (Machida, Col. 1, lines 28-31);

b) the second instance, "the proposed method is advantageous in that the electrode member can be wound around the spool without being bent." (Machida, Col. 1, lines 61-62);

c) the third instance, "according to the method of the present invention the electrode members are not forcedly bent anywhere. Therefore, the electrode members are not damaged." (Machida, Col. 2, 61-63); and

d) the fourth instance, "a portion consisting of separator only is wound in a first step or the winding operation, thereby eliminating winding of a portion of one of the electrode members at an angle of about 90° resulting frequently in objectionable short circuit trouble." (Machida, Col. 5, lines 63-68).

Therefore, the above-referenced independent amended claims recite structure specifically taught against by Machida. This weighs heavily in favor of a finding of nonobviousness of the claims, because the primary reference used to deny patentability specifically teaches away from the claimed invention.

Then, in the Answer, the Examiner refers to the prior Office Action of 10/30/00, in which it is stated:

Furthermore, one of skill would be motivated to use the mandrel of rectangular cross-section of Takeuchi for the mandrel of Machida (Office Action Dated 10/30/00, page 5).

The combination of Machida and Takeuchi is improper. As shown above, Machida makes it incredibly clear that electrodes are not to be bent or folded. Machida teaches away from bending/folding electrodes and provides a plurality of reasons bending electrodes is not desirable. Machida teaches a circular mandrel. One of skill, upon reading Machida, would in all likelihood conclude that bent/folded electrodes are problematic and certainly would not be motivated to bend electrodes as disclosed in Takeuchi. One of skill, after reading Machida, would in all likelihood bypass the teachings of Takeuchi, because Takeuchi discloses bent electrodes and a spiral electrode assembly that is pressed resulting in more bent electrodes. Indeed, the prior art is devoid of teachings to suggest the combination proposed by the Examiner. Thus, this an instance where "obviousness cannot be established," because there is an absence of "some teaching, suggestion or incentive supporting the combination" made by the Examiner. In re Geiger, 815 F.2d. 686, 688, 2 U.S.P.Q. 2d 1276 (1987); citing ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.3d 1572, 1577, 221 U.S.P.Q. 929,933 (Fed. Cir. 1984). Since there is no teaching, combining Machida with Takeuchi is improper.

There is yet another reason to conclude that Machida and Takeuchi are not combinable. The text and background of Machida disclose round mandrels or spools for winding the electrodes, whereas Takeuchi discloses a rectangular mandrel. Although

Takeuchi nowhere discloses a "round" mandrel or "circular mandrel," in the Answer dated May 22, 2003 the Examiners states that Takeuchi shows a "round" mandrel or "circular mandrel" six times (see pages 5,6,7,8, and 9). Also, in the Examiner's Answer dated 08/02/01 the Examiner stated:

"Takeuchi discloses both rectangular and circular mandrels, hence, the prior art combination has clear suggestion to use the rectangular mandrel of Takeuchi in place of the circular mandrel of Machida." (page 5).

The Examiner appears to have misinterpreted Takeuchi and impermissibly added to the disclosure of Takeuchi, because nowhere in the entire text of Takeuchi is a "circular mandrel" disclosed, and nowhere in the entire text of Takeuchi is the word "circular" written. Furthermore, FIG. 13 of Takeuchi does not show any "circular mandrel." Takeuchi only discloses that the electrode subassembly may be spirally wound before being pressed into a rectangular shape. This winding may be by hand, machinery or other suitable means. Thus, there is no suggestion in the prior art to use the rectangular mandrel of Takeuchi in place of the circular mandrel of Machida as the Examiner contends. Importantly, this "suggestion to combine requirement is a safeguard against the use of hindsight" to negate patentability. In re Rouffet, 149 F.3d 1350, 1359, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998). Hence, because the two references are so fundamentally different in their teachings and in the structure disclosed therein, Machida and Takeuchi are not combinable. These references cannot serve as the basis to deny the patentability of any of appellants' claims on the grounds of obviousness.

Thus, for the reasons set forth above there is no basis for the 35 U.S.C. §103(a) rejection of claim 1-19 on the grounds of obviousness.

IV. Conclusion

Appellants respectfully request favorable action on this Appeal, and that the claims 1-19 be allowed.

Respectfully submitted,


John M. Del Vecchio
Reg. No. 42,475

Hodgson Russ LLP
One M&T Plaza, Suite 2000
Buffalo, New York 14203
716-848-1367
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